

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application

Listing of Claims:

Claims 1-13 (Cancelled)

14. (New) A proton conductor comprising a base material, an acidic substance and a basic substance,

wherein the acidic substance has protons;

at least part of the protons are dissociated by the basic substance;

at least one of the acidic substance and the basic substance is immobilized on a surface of the base material; and

the base material has no electron conductivity.

15. (New) The proton conductor according to claim 14, wherein at least part of the at least one of the acidic substance and the basic substance is a polymer, and the base material is retained in a matrix of the polymer.

16. (New) A proton conductor comprising a particulate base material having an acidic substance immobilized on a surface thereof, and a particulate base material having a basic substance immobilized on a surface thereof,

wherein the acidic substance has protons; and

at least part of the protons are dissociated by the basic substance.

17. (New) A proton conductor comprising a base material, an acidic substance and a basic substance,

wherein the acidic substance has protons;

at least part of the protons are dissociated by the basic substance; and

the base material is a porous body having pores or through-holes, and one of the acidic substance and the basic substance is immobilized on an inner wall of the pores or the through-

holes of the porous body to form a first layer, and the other of the acidic substance and the basic substance is immobilized on the first layer by acid-base bond to form a second layer.

18. (New) The proton conductor according to claim 17, wherein the at least one of the acidic substance and the basic substance is an organic compound having a hydrophilic part and a hydrophobic part in the molecule.

19. (New) The proton conductor according to claim 18, wherein the organic compound forms a built-up film in the pores or through-holes.

20. (New) The proton conductor according to claim 17, further comprising a non-electron conductive substance, wherein the non-electron conductive substance clogs at least part of the pores.

21. (New) The proton conductor according to claim 17, wherein the porous body has at least the through-holes.

22. (New) The proton conductor according to claim 16, wherein the base material is composed of an inorganic substance.

23. (New) An electrolyte membrane comprising the proton conductor according to claim 16.

24. (New) An electrode comprising the proton conductor according to claim 16.

25. (New) A fuel cell comprising an anode, a cathode and an electrolyte membrane interposed therebetween, wherein the electrolyte membrane is the electrolyte membrane according to claim 23.

26. (New) A fuel cell comprising an anode, a cathode and an electrolyte membrane interposed therebetween, wherein at least one of the anode and the cathode is the electrode according to claim 24.

27. (New) The proton conductor according to claim 17, wherein the base material is composed of an inorganic substance.

28. (New) An electrolyte membrane comprising the proton conductor according to claim 17.

29. (New) An electrode comprising the proton conductor according to claim 17.

30. (New) A fuel cell comprising an anode, a cathode and an electrolyte membrane interposed therebetween, wherein the electrolyte membrane is the electrolyte membrane according to claim 28.

31. (New) A fuel cell comprising an anode, a cathode and an electrolyte membrane interposed therebetween, wherein at least one of the anode and the cathode is the electrode according to claim 29.